DOCUMENT RESUME

ED 426 169 UD 032 726

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TITLE Methods for Developing Resiliency in Children from Disadvantaged Populations.
PUB DATE 1996-03-31
NOTE 88p.; Prepared for the National Forum on Health.
AVAILABLE FROM Sparrow Lake Alliance, Department of Psychiatry, Hospital for Sick Children, 555 University Avenue, Toronto, Ontario, Canada M5G 1X8 ($10 Canadian).
PUB TYPE Information Analyses (070)
EDRS PRICE EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Child Development; *Disadvantaged Youth; *Early Intervention; Elementary Secondary Education; Family Influence; Program Descriptions; Program Effectiveness; *Resilience (Personality); *Risk; Social Influences; Urban Schools; *Urban Youth
IDENTIFIERS *Protective Factors

ABSTRACT

Protective factors that contribute to the development of resiliency in children, defined as "unusually good adaptation in the face of severe stress, and an ability of the stressed person to rebound to the prestress level of adaptation," are discussed. The biological, psychological, familial, and social factors related to disadvantages that undermine the development of the precursors of resiliency are identified, and factors that protect the potential for resiliency in each of these areas are discussed. The risk and protective factors within the child, the family, and the community that are relevant to the achievement of resiliency are discussed for developmental stages from conception through the school years. Goals and models of intervention specific to each stage that have been shown to foster the development of resiliency are outlined. These goals and models are illustrated by 12 "success stories" of established programs that have either proven their ability to help significant numbers of disadvantaged children achieve resiliency or are so well-designed and promising that they are worthy of continued scrutiny while their effectiveness and efficiency are being established. Ten recommendations are made for policies that would allow greater numbers of disadvantaged children to transcend adversity and achieve their developmental potential. An executive summary from "What Determines Health?: Summaries of a Series of Papers on the Determinants of Health," commissioned by the National Forum on Health is attached. (Contains 4 tables, 3 figures, and 172 references.) (SLD)

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ED 426 169

Methods for Developing Resiliency in Children from Disadvantaged Populations

Prepared for the National Forum on Health

by

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Executive Summary

This paper reviews the different ways that resiliency has been defined in the professional literature, and defines resiliency as "unusually good adaptation in the face of severe stress, and/or an ability of the stressed person to rebound to the prestress level of adaptation." Based on this definition, the paper reviews biological, psychological, familial and social factors related to disadvantage that undermine the development of the precursors of resiliency, and lists factors that protect the potential for resiliency in each of these areas.

The paper then proceeds chronologically through a number of stages — conception through birth, infancy, the preschool years, the school years — examining for each stage the risk and protective factors within the child, the family and the community relevant to the achievement of resiliency. For each of these, it lists crucial developmental tasks and then examines how risk and protective factors influence the achievement of these tasks and preparation for resiliency.

Next, the paper defines the goals and models of interventions specific to each stage that have been shown to foster the development of the precursors of resiliency by counteracting the major risks experienced during that stage. These are illustrated by 12 "success stories": established programs that have either proven their ability to help significant numbers of disadvantaged children achieve resiliency, or are well-designed and promising ongoing projects worthy of continued scrutiny while their effectiveness and efficiency are being established.

The paper concludes with 10 recommendations for policy that, if instituted, would allow significantly greater numbers of disadvantaged children to transcend adversity and achieve their developmental potential.

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Definition and Sources of Resiliency

The professional literature makes it clear that there is no single accepted definition of resiliency. Rather, the kind of positive outcomes used to define the resilient child vary depending on the outcome definitions used in each individual study (Kaufman et al., 1994).

This paper defines resiliency as unusually good adaptation in the face of severe stress (Beardslee, 1989) and/or the ability of the stressed person to rebound to the pre-stress level of adaptation (Garmezy, 1991a). This implies that the resilient child has gradually, over time, developed the resources needed to cope — and even to become stronger — while rising to the challenge of difficult conditions (Garmezy, 1993; Prevention and Children Committee, 1995; Egeland, Carlson and Sroufe, 1993).

Many sources of resiliency allow some children to transcend adversity and are often mutually reinforcing. They include:

- the child's genetic makeup and health;
- the "goodness of fit" between child and parents;
- the capacities of the parents — as individuals and as a couple — to support optimal development;
- the level of chronic stress — environmental, interpersonal or psychological — experienced by the family and the child;
- the perspectives of the parents and the child when confronted with stress.

It is these protective factors — within the child, the family, and their social environments — with which this paper is primarily concerned.

Many children experience high levels of chronic stress and adversity in regard to their health or their environment as they develop. But risks experienced within one aspect of their life, for example chronic illness, maltreatment or growing up in poverty, may be counteracted by protections provided by other aspects in what is called the protective triad (i.e., individual opportunities, close family ties and external support systems, including the school and the community: Garmezy, 1991b). Given such supports, some children become resilient despite chronic exposure to disadvantage, and some are even strengthened by their struggle against adversity (Sinnema, 1991; Cicchetti et al., 1993).

Resiliency is multi-dimensional: highly stressed adolescents with superior social skills are able to overcome major difficulties in both emotional adjustment and other areas of school competence (Luthar, Doernberger and Zigler, 1993).

Protective personal characteristics that help some children transcend environmental disadvantage include social competence (Ibid.), problem-solving skills and autonomy (Steinhauer, Santa-Barbara and Skinner, 1984), and a resilient perspective (Benard, 1991; Sheppard and Kashani, 1991). Children with a resilient perspective are basically optimistic. They have a sense of meaning and purpose, the will to overcome, confidence, self-esteem, and the inclination and ability to recruit social support. They are creative problem-solvers, able to rebound and persevere in the face of hardships, frustration and even initial defeat (Fine, 1991; Garmezy, 1991a; Wolin and Wolin, 1993; Williams, Wiebe and Smith, 1992), and they have a spiritual dimension that overlaps with hope (Danieli, 1994).

One experience common to the development of many of these protective personal qualities is that of having had a secure attachment within a cohesive and supportive family (see Figure 1).

Protective factors in families and schools that foster resiliency include:

- caring and support (Gribble et al., 1993);
- high but achievable expectations;
- opportunities for children to participate and contribute (Baumrind, 1989); and
- in families, the strength to endure and cope despite chronic stress and repeated crises (McCubbin, McCubbin and Thompson, 1992).

As Bronfenbrenner (1985) has shown, *living in a civic society* — according to an African proverb, it takes a whole village to raise a child — supports the family and favours the development of competence and of the precursors of resiliency. In communities with less social capital and little societal cohesion, more parental involvement and better child management are needed to raise resilient children. Even these may not be enough to counteract the overwhelming effects of extreme disadvantage and an uncivic community (Garbarino et al., 1992; Richters and Martinez, 1993; Capaldi and Patterson, in press).

The Achievement of Resiliency in the Face of Disadvantage

How can we best help children achieve resiliency despite disadvantage? The term "disadvantage" is often used as a synonym for poverty. The undermining effect of poverty is cumulative (Garmezy, 1991b). Children growing up in poverty show almost three and one-half times the conduct disorders, almost twice the chronic illness, and more than twice the rate of school problems, hyperactivity and emotional disorders (Ross, Shillington and Lochhead, 1994) than those who are not poor. In one large study, the deeper the level of poverty, the higher the

incidence of violence in children (three times greater in girls; five times greater in boys: Tremblay et al., 1994).

However, it is more the degree of inequity — that is, the extent of the gap between rich and poor in a society — and the degree of powerlessness and lack of control over one's life rather than the economic deprivation itself that most strongly undermines physical and mental health (Marmot, Kogevinas and Evans, 1987; Davey Smith, Bartley and Blane, 1990; Hertzman, Frank and Evans, 1990; Canadian Institute of Advanced Research, 1991). Any situation that increases inequity, including attempts by governments to cut their economic deficits in ways that aggravate their social deficits, can be expected to increase health and mental health problems (including suicides) and crime rates. New Zealand is often used as a shining example of what trickle-down economics can do for a country's economic woes. But what *has* happened in New Zealand since 1984, when it decided to tackle the economic deficit while ignoring the social deficit? While its cash flow problem has indeed been solved, the total national debt is double what it was in 1984. And, over the dozen years that New Zealand has been correcting its economic situation:

- its youth suicide rate — the highest in the world — has doubled since 1985;
- its crime rate (1993) is the highest of the industrialized countries;
- its poverty rate rose 40 percent from cuts to welfare and unemployment — nearly 25 percent of New Zealand children are being raised in poverty;
- its unemployment (using 1984 definitions) tripled in four years to 12.7 percent;
- its middle class has decreased;
- the gap between rich and poor, in both income and education, has increased substantially; and

for the first time in its history, New Zealand has a large impoverished underclass (Canadian Broadcasting Corporation, 1995).

In such circumstances, children are probably affected through increases in parental stress, family conflict, violence and abuse, through decreased supports and services in school and the community, and by identifying with their parents' alienation and sense of marginalization and betrayal.

There are different kinds and degrees of disadvantage. Poverty aggravates parental stress and family tension in many ways. It serves as a source of stress in its own right. It erodes parents' limited psychosocial resources and magnifies interpersonal and psychological problems. It aggravates parenting problems (Avison, 1994) and lessens opportunities for temporary escape from sources of stress. But evidence is mounting that, even for poor children, it is the combined effects of multiple environmental stresses (Rutter, 1979a; Rae-Grant, 1991) and the clustered effects of the psychosocial deprivations that often coexist with poverty — particularly maternal depression, parental substance abuse, parental violence and paternal criminality — rather than just low income that undermine competence and resiliency (Dembo et al., 1992; Ontario Mental Health Foundation, 1994; Byrne et al., 1996; Steinhauer, 1995a). Also, the transient poverty and life experience of immigrant children in supportive families differ from the type of disadvantage experienced by children raised in families trapped in a permanent underclass (Steinhauer, 1995a).

Children do not have to be poor to be disadvantaged. Children of chronically neglectful, conflicted, violent and abusive families are also disadvantaged, whether or not they are poor. Changing economic patterns, the increased need for two parents to work (Hanvey et al., 1994, p. 119; Avard and Chance, 1994), higher levels (by more than 10 times) of marriage breakdown since the Second World War (Barr, 1993), and the mobility that has, for many families, made extended family less available to share child care, have left many parents with less time and energy to devote to parenting (Hewlett, 1991a; Scrivener, 1994). In the 60 years that records have been

kept, never have children and parents spent as little time together (Watkins, Menken and Bongaarts, 1987), a situation that Mattox (1990) termed the "Family Time Famine." These days, about 65 percent of families with young children need two incomes to escape poverty (Vanier, 1994). This has greatly increased the need for affordable high-quality extra-familial child care. Without it, many families face a Hobson's choice: one parent can stay home to care for the children (thereby dragging the family into poverty), or they can settle for the only child care available, the quality of which may be far from adequate.

This paper now examines how biological, familial and environmental risks inherent in disadvantage undermine the potential for achieving competence and resiliency. Next it considers protective factors and processes that have helped many disadvantaged children rise above adversity, thereby fostering their development of resiliency. It concludes with models of selected interventions that nurture resiliency at personal, familial and community levels from conception through adolescence.

How Do the Risks Inherent in Disadvantage Undermine the Potential for Resiliency?

How do the risks inherent in disadvantage tend to undermine, at different ages, the potential genetic, familial, environmental and psychological sources of resiliency?

From conception to birth, the major risks faced are primarily *biological*, though some are environmental. What is commonly termed low birthweight really refers to two overlapping conditions: some babies are born too small (growth impaired), while others are born too soon (preterm delivery: Paneth, 1995). While most low-birthweight babies now survive because of improved neonatal care — including many weighing as little as 750 grams at birth — the lower

the birthweight, the greater the risk of preserving the infant's life at the cost of significant lifelong health and developmental problems. These may prevent the child from ever leading a full and productive life, while greatly increasing the cost to the community for expensive and often insufficiently available health care and remedial education (Allen, Donohue and Dusman, 1993; Hack et al., 1994). Low-, and especially very low-, birthweight babies are almost twice as likely to die at birth or during their first year. They have almost twice the risk of lifelong disease and disabilities, including cerebral palsy, visual problems, attention deficit hyperactivity disorder, learning disabilities and respiratory problems (Canada, 1992; McCormick, Gortmaker and Sobol, 1990).

Families from the poorest neighbourhoods are 1.4 times as likely as those from the richest neighbourhoods to have low-birthweight babies (Hanvey et al., 1994, p. 123), but it is not yet clear how much of such babies' less severe but more common developmental delays are a result of the disadvantaged environments in which low-birthweight children are more likely to live and grow. Certainly a disadvantaged environment aggravates the cognitive and behavioural disabilities that originate in biological deficiencies (Watkins, Menken and Bongaarts, 1987; Shiono and Behrman, 1995).

Biological factors that increase the risk of low or very low birthweight include extremes of maternal age (less than 20; over 45 years), multiple births, black race (independent of level of disadvantage: Paneth, 1995, p. 26; Shiono et al., 1986), maternal smoking and poor maternal diet. At least some of the social class gradient follows from the fact that the poorest mothers are the heaviest smokers (Institute of Medicine, 1985; Rush and Cassano, 1983). Smoking, which retards fetal growth, is the single largest modifiable risk factor contributing to low birthweight and infant mortality. Smoking during pregnancy, low maternal weight gain and low pregnancy weight

account for nearly two thirds of all growth-retarded infants (Kramer, 1987). Up to 20 percent of all cases of low birthweight could be prevented by eliminating smoking in pregnancy (Chomitz, Cheung and Lieberman, 1995). The abuse of alcohol and other drugs during pregnancy is also associated with low birthweight and preterm birth (Schneider, Griffith and Chasnoff, 1989; Rodgers, 1989; Canada, 1992).

Other biological risks during this period include fetal brain damage (e.g., Fetal Alcohol Syndrome), which often results in hyperactivity, difficulties in impulse control, dysphoric mood and inability to be soothed. These symptoms frequently result from maternal drinking or drug (especially cocaine) abuse during pregnancy. Fetal brain damage increases the rates of attachment failure, academic failure, oppositional/defiant and antisocial behaviour, and psychiatric problems in adult life (Mannuzza et al., 1993).

Social factors increasing the risk of low or very low birthweight include isolation, lack of psychosocial supports, and chronic high stress and abuse of the mother during pregnancy (Goodyer, 1990; Garmezy, 1991b; Carnegie Corporation of New York, 1994). Anything that combats isolation and counteracts the psychosocial stresses often associated with poverty also helps prepare for attachment, bonding and other precursors of resiliency in the neonatal period (see Diagram 1: Jacobson and Frye, 1991). Preterm delivery, which causes most low birthweight in the United States is, like fetal growth impairment, very much related to social class, and is a greater cause of infant mortality in developed nations than fetal growth impairment. Maternal smoking and poor nutrition — which are linked to fetal growth retardation — affect preterm delivery less than they do growth impairment.

In summary, decreasing maternal isolation, improving nutrition, and lowering smoking and alcohol and drug use during pregnancy can cause a significant though modest increase in the number of healthy and potentially resilient babies born to relaxed, prepared mothers.

From birth through the toddler years, the main threats remain biological and environmental, but the quality of the family environment becomes increasingly important as either a threat to or a potential source of resiliency. Increasing evidence suggests that consistently neglectful or abusive parenting (i.e., chronic stress) during the first one to two years of life may be associated with permanent brain damage. The ongoing development of the still immature — and highly vulnerable — infant brain is significantly influenced by the quality and quantity of stimuli received from the child's environment during periods of heightened sensitivity during the first three years. Thus, environment during this period has a major influence on brain development and thereby on cognitive potential and the capacity for control over intense feelings, including anxiety and aggression (Carnegie Corporation of New York, 1994; Keating, 1992; Perry, in press).

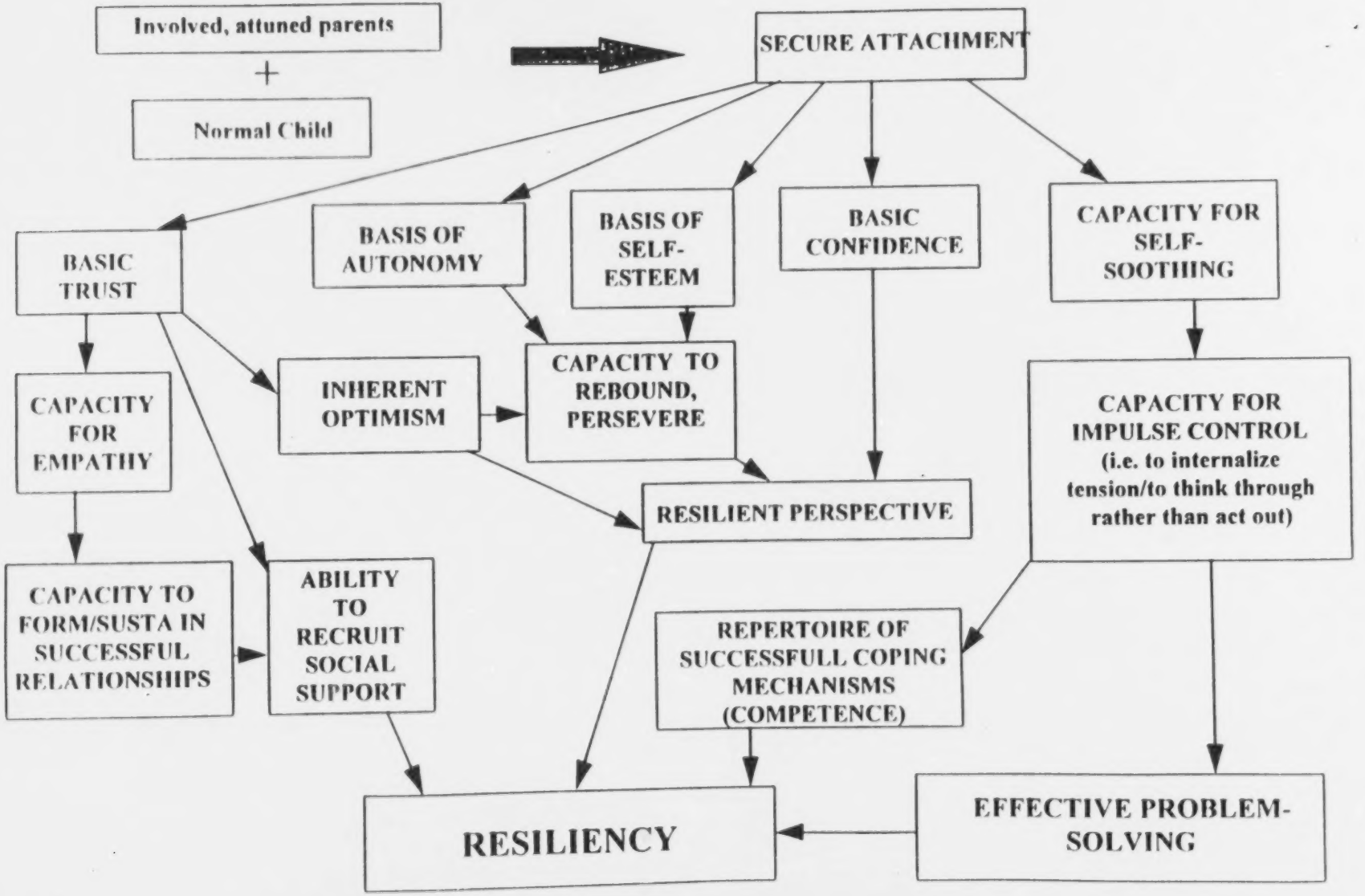
Another biological factor that can undermine potential resiliency is a physiologically (and at least at times genetically) low threshold of response by the brain's limbic system to unfamiliarity and change, which leads to a high and persistent level of arousal of the sympathetic nervous system (Garcia-Coll, Kagan and Reznick, 1984; Kagan, Reznick and Snidman, 1987). Such infants are more vulnerable both to insecure attachment and to behavioural inhibition (Manassis et al., 1994) and, with age, are prone to avoid new or stressful situations whenever they can. Avoidance decreases anxiety, but it does so in ways that keep the infant from developing more effective coping strategies. The lack of effective coping strategies denies the child a sense of mastery, favours habitual avoidance and predisposes the child to the development of anxiety disorders (Biederman et al., 1990; Hirshfeld et al., 1992). Secure, involved, sensitively attuned

parenting may help children develop more effective means of coping, thus protecting their potential for mastery, competence and resilience. **Figure 1 about here**

Probably the strongest single familial factor protecting the potential for resiliency during this period is anything that supports the establishment of a secure attachment to a primary caregiver. A secure attachment is favoured by a relaxed, secure, supported mother who is involved with and sensitively attuned to her child. It can be undermined by the mother's own unresolved attachment difficulties. Such residual difficulties often stem from the neglect and abuse the mother experienced — or believes she experienced — in her own childhood (Main and Goldwyn, 1984). The risk of attachment failure can also be decreased by: freedom from isolation; adequate social supports during the neonatal and toddler periods; effective treatment of maternal depression, psychosis or drug abuse; and support for the mother in the face of chronic friction, abuse or abandonment by her partner (Garmezy 1991b). The child's secure attachment to the father can also help compensate for the effect of an insecure attachment to the mother (Fox, Kimmerly and Schafer, 1991).

But not all attachment failures stem from parental deficiencies. Such infant-related factors as prematurity, deformities or chronic illnesses, especially if they limit contact between infant and parents and bar the parents from ministering to the infant during long hospital stays or interfere with the infant's capacity to participate in the bonding process, can undermine the processes of attachment and bonding (Minde, 1980). Hospital procedures that encourage parents to be actively and physically involved in the care of their child will foster attachment and protect the capacity for resiliency. Child characteristics, including difficult temperament, may interfere with "goodness of fit," that is, the child's basic temperament and other inherited characteristics may fail to meet the needs of the parents. When a poor fit occurs, it can undermine the bonding process central to the

DIAGRAM 1: SECURE ATTACHMENT AS A PRECURSOR OF RESILIENCY



achievement of competence and resiliency. On the other hand, an easy (i.e., "laid back") temperament can buffer the child's reactions to stress and increase the child's adaptability, favouring goodness of fit and successful attachment (Werner, 1984; Raine, Venables and Williams, 1990). However, too low a level of arousal (too little anxiety) has its own risks for the development of delinquency and adult criminality (Magnusson, Klinteberg and Statton, 1991; Raine, Venables and Williams, 1990; Tremblay et al., 1991).

The vulnerability of an infant with a low threshold of response and high sympathetic arousal to insecure attachment may be increased if the primary caregiver is herself [1] insecure or has an anxiety disorder (Manassis et al., 1994). The response of an anxious, depressed or insecure parent to an inhibited (anxious and shy) child may, if the response is critical and lacking in encouragement, undermine the child's development of the coping mechanisms that could otherwise guard against internalizing disorders and protect his or her capacity for resiliency (Weissman et al., 1987; Kochanska, 1991; Baldwin, Baldwin and Cole, 1990). In the preschool and school-age years, the opportunity for free play with peers, if successful, may enhance social skills, reduce avoidance behaviours and decrease the child's anxiety and inhibition, thus favouring the achievement of resiliency (Rubin, 1982).

Throughout the *toddler, preschool and school-age years*, the major factor protecting the potential for resiliency will be the ability of the disadvantaged child's parents, as individuals and as a couple, to meet that child's developmental needs. Illness or disability, which often undermine the achievement of competence, can, in some children, actually spur the achievement of resilience (National Center for Youth Disabilities, 1991; Sinnema, 1991). How a child responds to stress

[1] I refer to the primary caregiver as "she" because, in the vast majority of Canadian families, the mother assumes most responsibility for infant care, thus becoming the primary attachment figure. In families where the father does most of the child care, he would be the primary attachment figure.

may be influenced by that child's sex. Girls are more likely to respond by developing internalizing disorders (especially separation anxiety disorders and depression), while boys are more prone to externalizing disorders (Attention Deficit Hyperactivity Disorder, Oppositional Defiant Disorder; Conduct Disorder: Offord et al., 1989; Last et al., 1987) (see Table 1).

Table 1. Six-Month Prevalence of Individual Psychiatric Disorders by Age and Sex

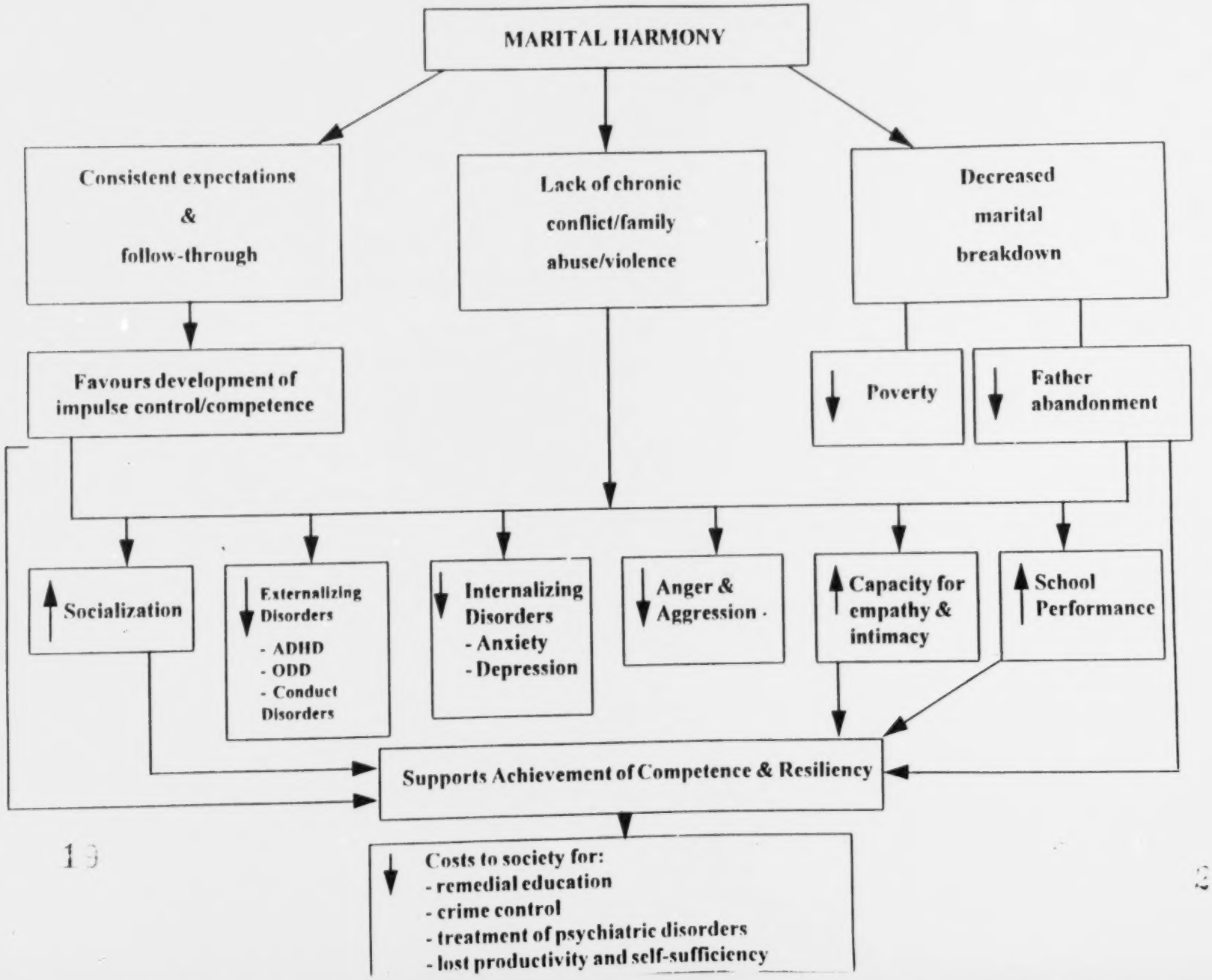
Age and Sex Groupings	Conduct Disorder (%)	Hyperactivity (%)	Emotional Disorder (%)	Somatization (%)
4–11				
Boys	6.5	10.1	10.2	—
Girls	1.8	3.3	10.7	—
12–16				
Boys	10.4	7.3	4.9	4.5
Girls	4.1	3.4	13.6	10.7

Source: Derived from data in D. R. Offord et al., 1989.

Factors in individual parents that commonly undermine successful parenting cannot always be controlled. Individual parent characteristics that affect the achievement of resiliency in children can be genetic and/or psychodynamic.

At a genetic level, factors transmitted to the child that favour resiliency include freedom from congenital diseases or such psychiatric disorders as affective disorder, schizophrenia, anxiety disorders, substance abuse and developmental disabilities. An important protective genetic factor would be the presence of at least adequate intelligence (Luthar and Zigler, 1992). Children who have one parent who has had a major depression are between two and four times as likely to have a psychiatric disorder themselves. Although this is often depression, the child's vulnerability to both anxiety disorders and behavioural problems is also increased (Beardslee et al., 1993; Rutter and Quinton, 1984; Pape et al., 1996).

DIAGRAM 2 MARITAL CONFLICT AND ITS EFFECT ON DEVELOPMENT OF RESILIENCY



Children of parents with an anxiety disorder are more likely to have anxiety disorders but, although the familial transmission of anxiety disorders has been established, it is not clear whether the familial influence is hereditary, environmental or a combination of the two (Reeves et al., 1987; Turner, Beidel and Costello, 1987; Messer and Beidel, 1994; Thapar and McGuffin, 1995).

A boy born to a family with an older criminal member is two-and-a-half times as likely to become delinquent himself, although here again the relative role of genetic and environmental factors in the transmission is not clear (Fisher, 1985; Gabel and Schindledecker, 1993).

At a psychodynamic level, mental health in a parent may — but will not necessarily — favour the achievement of resiliency. How much parental mental illness will undermine the achievement of resiliency will vary depending on how the illness undermines the child's development. This in turn will depend on the age and developmental status of the child, the nature, severity and periodicity of the parent's disorder, side effects of the parent's treatment, the presence in the home of another caregiver able to meet the needs of the children and to buffer them from the effects of the other parent's illness, and indirect effects of the illness on the marital relationship.

Particularly likely to undermine the potential for resiliency are parental disorders that interfere with attachment, including anything that will block a primary caregiver's capacity for full involvement with and sensitive attunement to the developing infant. These include the direct influence on the parent's pattern of relating or parenting caused by the major mental illnesses such as affective disorder, schizophrenia or any other conditions or personality traits that, either themselves or from the effects of the medications used to treat them, contribute to parental preoccupation and withdrawal or to episodes of unpredictable, erratic or hostile parental behaviour that frighten the infant (Resnick, Harris and Blum, 1993; Beardslee et al., 1993).

The residual effects on parents who were themselves neglected or abused during their own upbringing — and it is the parent's current perception rather than what actually occurred that counts — may undermine attachment or any other aspects of parenting, while proving extremely difficult, though not impossible, to overcome (Main and Goldwyn, 1984). Parental substance abuse also undermines the child's capacity for resiliency while often resisting attempts at remediation (Reich et al., 1993). After successful attachment has been achieved, parental psychopathology affects child development primarily indirectly through its corrosive effects on the marriage and on parent-child relationships.

Parental psychopathology does not invariably undermine the capacity for resiliency. Some people, despite considerable psychopathology, parent surprisingly effectively. Also, adversity can spur the development of the personal resources needed to achieve resiliency, especially in temperamentally favoured individuals who have been securely attached [2] (Beardslee, 1989; Garmezy, 1991a; Cicchetti et al., 1993). When this occurs, however, the availability and supportiveness of the other parent or some mentor outside the immediate family — a relative, teacher, youth leader, neighbour or therapist who genuinely cares about the child and is sufficiently involved to serve as a parent surrogate, usually for an extended period of time — is often crucial (Rutter, 1979b). **Figure 2 about here**

Marital harmony fosters the capacity for resiliency (see Figure 2). Marital conflict, however, makes consistent expectations and regular follow-through by both parents less likely, thereby predisposing children to poor impulse control and socialization (Fergusson, Horfwood and Lynskey, 1992; Pedersen, 1994). As well as raising the level of family tension, marital conflict affects children in a number of ways. It polarizes parents, which invariably undermines

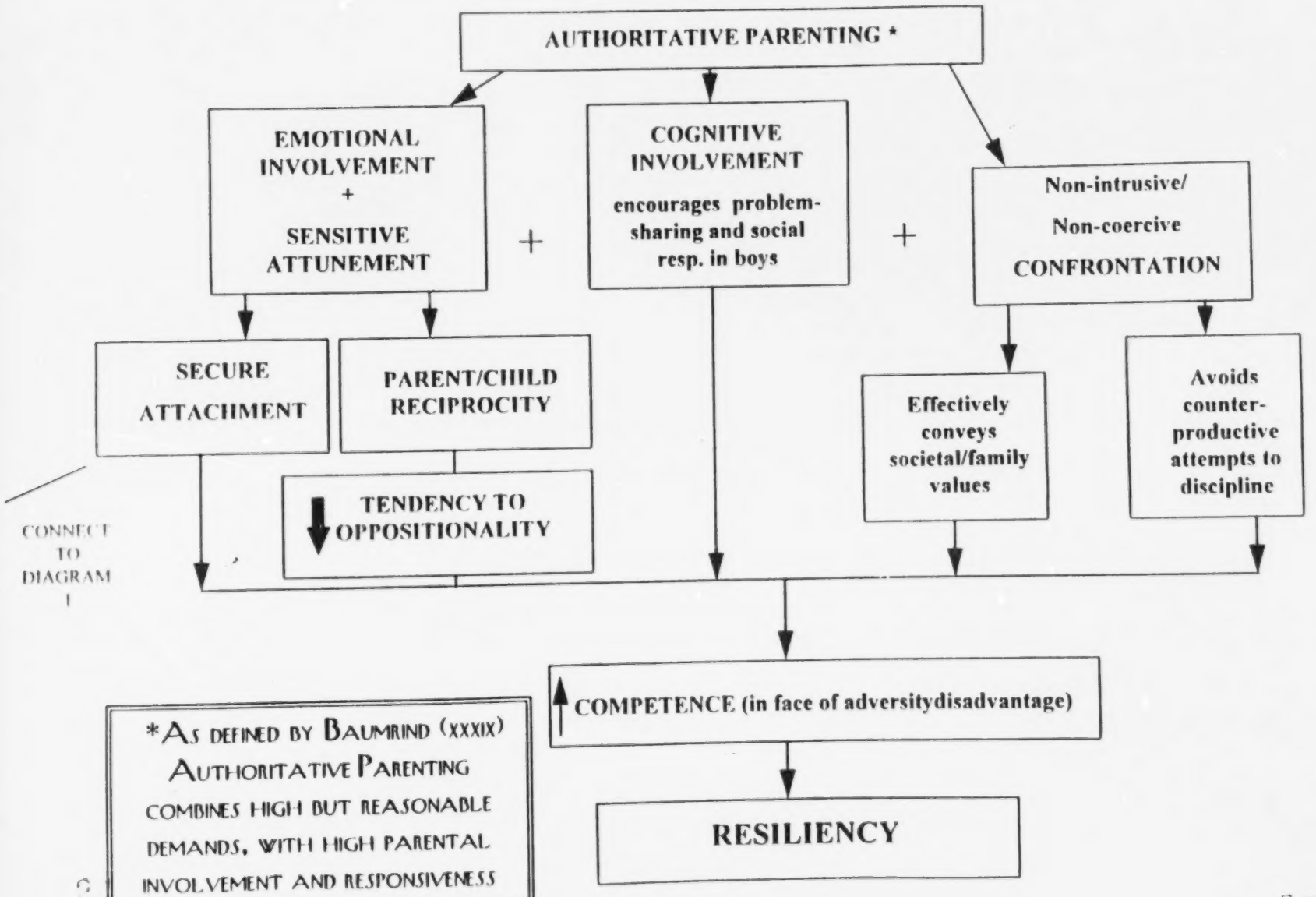
[2] Paul Zindel's play *The Effect of Gamma Rays on Man-in-the-Moon Marigolds* bears eloquent testimony to this pattern of familial adversity serving as a spur to the achievement of resiliency.

consistency. It also "triangulates" one or more children who are trapped between the conflicting expectations of the battling parents. If the conflict is sufficiently intense or chronic, it may precipitate family violence, and that will increase the risk that the child will become aggressive, lower his or her capacity for empathy, and increase his or her vulnerability to psychiatric disorders and antisocial behaviour, even if the child is not the one being abused (Hinchey and Gavelek, 1982; Lewis et al., 1983; Jaffe et al., 1986; Moore et al., 1989; Widom, 1989).

Finally, severe and chronic marital conflict frequently ends in marriage breakdown. This in turn results in one or more of the following consequences: the child being raised by a single parent (doing the work of two); the single-parent family being mother-led (as 84 percent of Canadian single-parent families are: Hanvey et al. 1994, p. 6); abandonment by the father (loss of emotional and possibly economic support: Hewlett, 1991b); the mother-led single parent family falling below the poverty line (as more than 60 percent of such families do: Hanvey et al., 1994, p. 117); and the child being raised in a reconstituted family (which also increases the risk of poor developmental outcomes: Philp, 1995). Thus, often the hazards of family breakdown are potentiated by the sequelae of the separation, all of which — but especially poverty — involve significant risks of their own.

The *parenting style* of an intact family that combines a high level of caring and involvement with high but reasonable expectations is most likely to help children develop the confidence, the competence (and the associated feeling of well-being), the coping skills needed to maintain competence, and the sense of perspective that shapes how they react to stress. The interaction of these factors contributes to the achievement of resiliency (Garmezy and Masten, 1991; Barnes and Farrell, 1992; Resnick, Harris and Blum, 1993; Dodge, Pettit and Bates, 1994; Campbell, 1995) (see Figure 3). **Figure 3 about here**

DIAGRAM 3: PARENTING STYLE, & ITS EFFECT ON DEVELOPMENT OF RESILENCY


AUTHORITATIVE PARENTING *
EMOTIONAL INVOLVEMENT + SENSITIVE ATTUNEMENT
COGNITIVE INVOLVEMENT encourages problem-sharing and social resp. in boys
Non-intrusive/ Non-coercive CONFRONTATION
SECURE ATTACHMENT
PARENT/CHILD RECIPROCITY
TENDENCY TO OPPOSITIONALITY
Effectively conveys societal/family values
Avoids counter-productive attempts to discipline
CONNECT TO DIAGRAM 1
COMPETENCE (in face of adversitydisadvantage)
RESILIENCY
*As defined by Baumrind (xxxix) Authoritative Parenting combines high but reasonable demands, with high parental involvement and responsiveness

Authoritative parents, as defined by Baumrind (1989), combine high but reasonable demands, high involvement and sensitive attunement to the needs of their children, and a high level of cognitive involvement. In infancy and through the preschool years, cognitive involvement consists primarily of cognitive and language stimulation. With age, however, cognitive involvement increasingly takes the form of encouraging children to speak up for themselves and negotiate successfully with others, a skill that is a forerunner of effective problem-solving. Authoritative families show consistently high levels of reciprocity, in that members are sensitive and responsive to each others' needs. Without reciprocity, children tend to resent and oppose even reasonable parental limits and expectations. Authoritative families typically have clear and consistent expectations of their children, backed up by a predictable, non-coercive and non-restrictive form of discipline that serve as a model of problem-solving and effective conflict resolution.

Authoritative families do not avoid confrontation when it is needed but, since their confrontations are not coercive, they confront in a way that encourages socialization and models effective problem-solving. Since these families are non-intrusive, they encourage their children to assume responsibility for and to learn from the consequences of their own behaviour. They avoid the extremes of excessive parental passivity (habitual non-confrontation) and parental coercion, both of which undermine effective socialization. Children typically respond to parental coercion with anger and rebellion. Their preoccupation with the unfairness of the parental assault keeps them from learning to reflect on and take responsibility for the inappropriateness of their behaviour. Authoritative families consistently produce highly competent children, and are least likely to raise incompetent children. Competence achieved in the face of adversity, as was discussed above, is a prerequisite for resiliency.

Parenting style affects boys and girls somewhat differently. Parental warmth, for example, increases social responsibility in both boys and girls, but improves intellectual competence in boys only. Similarly, while cognitive responsiveness increases general competence and social assertiveness, it fosters social responsibility in boys only. Firm but not coercive parental controls increase social competence in both girls and boys, but in girls they do so by increasing social assertiveness, while in boys they do so by enhancing social responsibility (Baumrind, 1989).

During the school-age years, disadvantaged children are generally less likely to develop the cognitive, emotional and social skills needed for success in school. They are also more likely than children from affluent areas to have attention difficulties, to be hyperactive and to have poor impulse control. Boys are more likely to show these forms of behaviour than girls (Tremblay et al., 1995). Such children are generally at greater risk for school failure and delinquency. Already denied initial success, they begin school at risk. Their experiences there can further undermine both their confidence and their competence. However, good child care — in their families or in high-quality alternative care or early child care and education (ECCE) — can help disadvantaged children attain the control required to sit still, to focus their attention and to work independently. Readiness to learn in kindergarten is the strongest predictor of success in mathematics in eighth grade and is a protective factor against the development of delinquency (Fuchs and Reklis, 1994). Those who have mastered, before starting school, the social skills and the control over aggression that they will need to succeed with peers and to accept a teacher's authority are, like their non-disadvantaged peers, primed for academic, social and emotional success. Children who, because of secure attachments, possess the basic trust that enables them to use their teacher as a learning partner, along with the associated self-esteem and confidence they will need to take the chances

required for successful learning, are candidates for early academic success. This will, in turn, reinforce their confidence, self-esteem and resilient perspective.

Boys are more likely than girls to have trouble in Grade 1, because of their greater cognitive immaturity and because boys have a higher incidence of genetically based learning disabilities. Again, effective parenting can help overcome disadvantage by providing the will, skills, motivation and ongoing supervision of homework required for school success. The less time senior public school students spend unsupervised, the less likely they are to abuse drugs and the more likely they are to be good students (Richardson et al., 1989). In fact, by age 14, success in school — especially in English and history — is related more to what is going on in a child's family than to what is happening in the child's school (Coleman and Hoffer, 1987). With 20 percent of Canadian public school children spending time unsupervised while parents work or attend school, parents and schools can help maximize academic and social competence by giving children sufficient, intersectoral, after-school services integrated with the educational system in a seamless day (Hanvey et al., 1994, p. 7).

School failure and inadequate control over aggression frequently coexist and potentiate each other. Boys who are impulsive and hyperactive, low in anxiety and lowest in reward dependency in kindergarten (age five) are at risk for becoming violent and antisocial in adolescence (Tremblay et al., 1994; Magnusson, Klinteberg and Statton, 1991). Boys who are violent in kindergarten are more likely to remain violent if they do poorly in school (Tremblay et al., 1991). By Grade 2, the learning problems that often accompany delinquency are well established: in one study, 45 percent of conduct-disordered children were already behind in reading and 36 percent were behind in writing (Meltzer et al., 1984). Poor school performance and a weak bond to school are often complicated by poor school behaviour. This elicits

disciplinary action by the school, initiating a struggle that, escalating through primary and secondary school, often leads to both delinquency and dropping out by adolescence (Loeber and Keenan, 1995). Involved and effective parenting, supplemented when required by high-quality child care or ECCE before school entry, can significantly improve children's cognitive and language development, their social competence, their control over their aggression, their compliance with adult instructions and their readiness to learn, while decreasing the number of behaviour problems reported by Grade 1 teachers (Bertrand, 1993).

A school that provides a stimulating and supportive alternative environment able to buffer for many children the effects of disadvantage can help even poorly prepared children transcend adversity by preparing them to succeed in school. Such schools create a safe environment in which children feel secure, respected, challenged and cared for, despite the occasionally undermining effects of family and community. These schools present high academic and behavioural expectations along with the structure, support and enrichment needed to help students achieve their potential. They have teachers who genuinely care about their students and who are prepared to become involved with them and to serve as mentors for students willing to use them in that way. In such schools, the ethos supports respectful and reciprocal relationships, and actively defines bullying as unacceptable. Such schools work at building bridges between the school and the community, and welcome the community as a true partner in the shared task of helping children achieve their potential in school and in life (Rutter et al., 1979b; Sylva, 1994; Comer, 1985; 1988).

A child's peer relationships can do much to shape his or her attitudes and behaviour during the school years and, increasingly, through adolescence. Peer relationships provide another chance for children to learn the interpersonal skills so important to social competence. They

provide a community in microcosm that can either support or undermine the child's mastery of problem-solving, self-esteem and control over emotions (including aggression), while helping the child move toward increasing independence. Informal or supervised group recreational activities may be a significant source not only of fun, but of skills that in themselves can help children succeed in spite of disadvantage (Kellam, 1990; Jones and Offord, 1989). Successful experiences with peers help children learn to follow rules and take turns. For socialized children, group activities can offer an antidote to boredom and important opportunities for the successful sublimation of aggression. Well-supervised group activities offer not only all of the above, but also provide another opportunity for an ongoing association with a mentor, an experience frequently found in the history of children who achieve resiliency in the face of disadvantage (Kellam, 1990). For some highly anxious children, particularly those with anxious parents, successful relationships with peers can provide the models and experience that stimulate the formation of the coping mechanisms that help counteract excessive anxiety and the drift toward increasing avoidance (Manassis and Bradley, 1994).

Children and youth whose family and school experiences have for any reason been alienating may turn to their peers for the sense of belonging and status they are not finding at home or in school. The choice of peers can be a strong influence supporting either prosocial or antisocial attitudes and behaviour. Often an oppositional child or teenager finds acceptance and support in a peer group based on shared resentment and rejection of family, school, adults, authority, other ethnic or racial groups, or the mores of the society from which he or she feels alienated. If that group feeling is then cemented by partying (based on the communal consumption of alcohol or street drugs) or by shared antisocial behaviour, the youth is assured a readily available source of support that serves as an antidote to loneliness and a model for identification.

During adolescence, such a peer group may be the predominant social influence, reinforcing increasingly antisocial attitudes and behaviour (Henggeler and Borduin, 1990). Until recently, such unofficial or official gangs consisted largely of males, but criminologists and police report that gangs of teenage girls are a new, rapidly spreading and worrying phenomenon (Matthews, 1993).

But how does *life in a disadvantaged community* undermine poor children's opportunities to achieve their developmental potential? Both the hyperactivity and conduct disorders so frequently associated with academic failure and inadequate socialization are more than twice as common in poor children as in those who are not poor (Ross, Shillington and Lochhead, 1994; Tremblay et al., 1994). A Quebec study of 4000 children has shown that the deeper the level of poverty, the higher the level of violence, especially for girls (Tremblay et al., 1991). We suspect that this stems from the sense of hopelessness that comes from feeling powerless and marginalized. We know that in uncivic societies — societies marked by an absence of shared beliefs, values and behavioural norms and by pervasive mistrust, lack of communication and lack of social cohesion among identifiable subgroups within the total population (Putnam, 1993) — a higher level of parent involvement and more effective monitoring and discipline are needed to socialize children successfully. Neighbourhoods high in density, crime and drug abuse but low in cohesion or a sense of control of their own destiny are likely to undermine even many committed families' attempts to raise children successfully (Bronfenbrenner, 1985; Garbarino et al., 1992; Richters and Martinez, 1993).

We know that abusive parenting, a potent contributor to both internalizing and externalizing psychiatric disorders in children and to delinquency (Ontario Mental Health Foundation, 1994), commonly complicates the isolation so common in disadvantaged populations.

The alienation can serve to perpetuate ongoing, even if self-imposed, social deprivation, and to insulate such families from social sanctions against abusive behaviour that, in less isolated families, could have a moderating effect. Longstanding isolation is frequently accompanied by increasing depression, resentment and hostility, all of which are associated with higher rates of abusive parenting, psychiatric disorders, school failure and drop-out, and juvenile delinquency (Ontario Mental Health Foundation, 1994). Also, in an uncivic society, groups further from the centre of power typically feel marginalized, and the resulting sense of exclusion from society's benefits frequently potentiates alienation, a loss of social cohesion and the rejection of the behavioural norms of the larger society (Steinhauer, 1996). When poverty and marginalization are superimposed on each other, as occurs in some of our disadvantaged minorities, it may take considerable personal strength and familial support to achieve resiliency and productivity despite the unfriendly environment.

Many of these factors influence the lives of Aboriginal children and young people living on reserves. Many such communities are multiply disadvantaged, with their inhabitants very much marginalized (Hanvey et al., 1994). Does the degree to which these Aboriginal communities feel isolated and powerless, over and above the psychological scars remaining from an earlier age when children were routinely taken from their families and reserves to be educated in what for them was a foreign culture, account for the high levels of substance abuse, family violence (up to 85 percent), alcoholism (nearly 80 percent) sexual assault and incest in these communities (Canadian Council on Social Development, 1987; Griffiths and Yerbury, 1995)? We know that substance abuse, delinquency and suicide in Aboriginal children and youth are far above the national average (Vanderburg, Weekes and Millson, 1995; Steinhauer, 1996). Yet significant numbers of Aboriginal children, despite often extreme adversity, manage not just to survive but to

succeed. Their ability to do so is a tribute to the power of personal resiliency with or without family support.

Promoting Resiliency in the Face of Disadvantage: Success Stories

Considering the major risks that threaten successful development from conception through adolescence, have any programs demonstrated the ability to neutralize these factors and to protect the potential for significant numbers of children achieving resiliency in spite of disadvantage? Let us recall that even in the face of major stress — be it in the child, the family or the community — other factors may still sustain developmental competence and help the child not just to survive but to rise above adversity.

As in the preceding section, each developmental level is presented in turn.

Goal #1: From Conception Through Delivery: Interventions to increase the number of healthy babies born to relaxed mothers.

During this stage, successful interventions will have a proven ability to decrease the number of low and very low-birthweight babies, and/or the number of infants born brain-damaged as a result of maternal substance abuse during pregnancy. Although the goal is to decrease the risk to the health of the baby, in most cases the social stresses and lifestyle problems of the mother will have to be addressed to improve her health and that of the baby.

Conventional prenatal care is *not* the solution to the problems of low birthweight (i.e., growth impairment and preterm delivery). For optimal effectiveness, prenatal care should target the known causes of low birthweight. Smoking cessation programs, which are not emphasized in most prenatal care, are the single component best able to address the highest modifiable

contributor to low birthweight and infant mortality. Purely nutritional interventions have only a modest effect on a small subset of women whose babies are at risk for low birthweight (U.S. Department of Health and Human Services, 1989). But this does not mean that prenatal care or nutritional programs are not worthwhile.

Women who receive prenatal care do have somewhat fewer low-birthweight babies and lower infant mortality, but it is not clear whether this is because of the prenatal care itself or because those women who use prenatal care tend to be healthier, better educated and more advantaged. We do know that the greatest benefits of prenatal care lie beyond the prevention of low birthweight. These include: the diagnosis and treatment of medical conditions affecting the health of the baby and the mother; the provision of education about pregnancy, labour and delivery for first-time mothers; the linking of poor mothers to valuable medical and social services, including supports for both parents and children whose ability to improve developmental outcomes for low-birthweight babies is proven; and the fact that those mothers who choose to receive prenatal care are more likely to use preventive interventions after the birth of their babies (Bates et al., 1995; Paneth, 1995).

Here are two descriptions of quite different prenatal care programs that have demonstrated the ability to produce healthier babies for better prepared and more relaxed mothers. A third, based on a home visiting model, is grouped with other such interventions and is described under Goal #2.

1. The Prevention of Preterm Delivery Through Improved Prenatal Care in France

Actions on non-medical determinants of health: This program first determined through epidemiological studies that women of low socioeconomic status were at higher risk for preterm births and for low-birthweight babies. Then, from an analysis of the principal causes of preterm birth and the preventive techniques available, it reorganized service delivery, evaluating the results and analysing cost-effectiveness.

Education was the key intervention, since the main obstacle to effective prevention was inadequate public understanding stemming from insufficient dissemination of pertinent information. For the program to succeed, doctors and midwives (via journal articles and conferences) and the women themselves (via the press and television) needed to learn that many preterm births could be prevented by a well-organized approach with both medical and social components. One goal was to alert professionals to identify women with cervical incompetence (a condition increasing the risk for preterm labour) within the first trimester, to ensure:

- women at risk would receive full care with regular examinations to detect signs of risk of preterm labour;
- women at risk would reduce physical exertion and be prescribed rest by having them stop work, and by persuading their husbands or other family members to share household responsibilities;
- a trained midwife would be monitoring women at risk in their homes weekly; and
- highest-risk cases would be admitted to hospital.

Educating women to modify their lifestyle to decrease their risk of preterm labour was central to the program.

Reasons for the Initiative: The program was developed to improve prenatal services and reduce preterm births, which — given advances in neonatology that were keeping alive babies who once would have died — were producing many more immature babies weighing less and less at birth. Concern about how many of these children were surviving with variable degrees of disability and the sharp increase in costs for their care prompted the move to develop a coherent and well-coordinated program to decrease preterm births. Since 1945, all pregnant women in France had received a stipend for having at least one prenatal consultation during the first trimester of pregnancy. However, before this intervention, prenatal care before the last month of pregnancy was provided by family doctors who, generally speaking, were not enthusiastic about a new prevention policy. For that reason, the new program was introduced by obstetricians or midwives under a specialist's supervision at outpatient maternity clinics in four areas.

Actors: This program counted on the contributions of French doctors, midwives and public health authorities, and French women at high risk for preterm birth and low birthweight.

Analysis of the results: Results were obtained on four different sets of data. One set (city of Hagenau) showed that the socioeconomically disadvantaged and poorly educated mothers were hardest to involve but benefited most. In the Martinique study, which relied heavily on home-monitoring of high-risk women, the risk of preterm birth in the disadvantaged group was reduced to the same level as the "privileged" group. The authors stress that success was achieved not by using specialists or technology, but by educating midwives and patients.

Replicability of the initiative: Successful replication would require that physicians and Ministries of Health be committed to a program based on the education of doctors and midwives, and on the primary role of women themselves in a prevention policy.

Funding: The program largely paid for itself by a better use of existing government funding for maternal and child health. The major new item was the extensive public education campaign to modify women's opinions of what adequate prenatal care should be.

Evaluation: The nationwide results showed a decrease in preterm deliveries, from 8.2 percent in 1972 to 5.6 percent in 1981. The results were extensively published in professional journals. A cost-benefit analysis led to replication of the program on a national scale by the French government in 1971 (Papiernik, 1984; Goujon, Papiernik and Maine, 1984; Papiernik et al., 1985; 1986).

2. The Montreal Diet Dispensary

Actions on non-medical determinants of health: The Montreal Diet Dispensary (MDD) is the only working example of a supplementary maternal food program in North America established before the 1970s. The MDD provides nutritional counselling, motivation and food supplements, when needed, to high-risk pregnant women, 62 percent of whom are on social assistance and almost 10 percent of whom are teenagers. The MDD works to break the poverty cycle through a three-pronged program that includes:

- a home visit to establish rapport and begin nutritional assessment;
- education and motivation of clients through ongoing counselling; and

- food supplementation (94 percent of clients receive a litre of milk and an egg a day).

Women are taught that they are eating to feed a baby they have never met. The earlier in pregnancy counselling starts, the better the results. Volunteers play an important role in the program.

Reasons for the initiative: The director, Agnes Higgins, had noted that 80 percent of the mothers seen in public prenatal clinics were poorly nourished entering pregnancy. They were underweight and had low protein intake, an increased risk for teenage mothers especially since underweight mothers need to gain more to nourish and protect the fetus. Poverty, lack of motivation and inaccurate professional advice to underweight pregnant women were thought to be compounding their nutritional problems.

Actors: The key counsellor is a dietitian. The program's success derives from the relationship she establishes with the client in biweekly or, in severe cases, more frequent visits.

Analysis of the results: In a study of more than 1000 women, infants of MDD mothers had significantly higher birthweights than those of high-risk women not enrolled.

Replicability of the initiative: This program is the precursor of U.S. government programs of nutrition supplementation and education for pregnant women. A pilot project, with the MDD helping two local community service centres to apply the MDD method of nutritional counselling, appears promising at 18 months. The national foundation of the March of Dimes was impressed

enough to sponsor a series of three-week internships in the program. Participants lauded the program, stressing the importance of its counselling component.

Funding: This private non-profit corporation is a registered charity with a volunteer board and a tax exemption from both federal and provincial tax authorities. Fifteen percent of its nutrition counselling budget is raised directly from the community; the rest is obtained presumably from the United Way and government sources.

Evaluation: The MDD babies born in 1991 had half the usual evidence of low birthweight expected in a disadvantaged population, with only 4.9 percent weighing less than 2500 g. The cost of the program per pregnancy is about $300. This suggests considerable benefit in terms of reduced morbidity and costs (Wynn and Wynn, 1975; Siever and O'Connell, 1979; Higgins, 1975; Montreal Diet Dispensary, 1991).

Goal # 2. From Birth and for at Least Three Years: Home visiting programs to support the mothers of children at risk.

Home-visiting programs are an extremely useful way — and, in some cases, the only way — of successfully engaging extremely high-risk and isolated women in programs to reduce low birthweight and prematurity (Goujon, Papiernik and Maine, 1984; Olds et al., 1986a).

During the first three years of a child's life, home-based parent/child support programs also are well suited to decrease abuse and to protect the potential for competence and resiliency of children in high-risk families. At this stage, especially inexperienced parents and those without support systems of their own may accept support from home visiting programs, or may prefer

drop-in community-based child development or parenting centres able to empower them, to combat their isolation, and to help meet their own and their babies' needs. Such programs can also identify any special needs of the child, and when necessary, ensure that these needs are met by initiating and facilitating referral for comprehensive assessment. They may also provide high-quality child care, specialized programs and respite for parents of children with special needs. Descriptions of three such programs that have demonstrated their effectiveness are highlighted below.

3. Prenatal and Early Infancy Project (Olds)

Actions on non-medical determinants of health: This is a home-based education program by nurses that went over more than two years. The program encouraged:

- good nutrition;
- decreased smoking;
- decreased alcohol and drug use;
- adequate rest;
- preparation for pregnancy and delivery;
- an understanding of human development, temperament, and infants' socioemotional and cognitive needs;
- enhancement of the woman's informal support network; and
- links with other services, including prenatal and nutritional supplementation.

Periodic health and developmental screening was also carried out. The nurses visited families an average of 8 times during pregnancy and 23 times from birth to two years. Education directed to the mother's needs at the time made up 83 percent of visiting time.

The program designers recognized that their anticipated outcomes had multiple determinants that had never been studied comprehensively using a rigorous experimental design.

Reasons for the initiative: This project was designed to decrease the number of cases of low-birthweight babies and to improve child health and development, parental functioning, and interaction among mothers who were first-time parents and/or low socioeconomic status and/or single and/or under 19 years of age. The program was delivered in a high-risk, semi-rural community with one of the highest rates of infant mortality and the highest rate of reported and confirmed child abuse in New York State.

Actors: This already classic program and study was carried out by David Olds of the University of Rochester (New York) and a team of researchers and nurses he assembled for the purpose.

Analysis of the results: This project produced many positives, especially for the mothers at greatest risk and those most intensely involved. The visited mothers smoked less, had better home environments, and made better use of childbirth classes, nutritional supplement programs and other services. Young adolescents and smokers gained more weight during their pregnancies and had heavier babies. Mothers who smoked had 75 percent fewer preterm deliveries. Visited mothers were more involved with the babies' fathers, their family, friends and service providers, and were more likely to be accompanied by a supportive person for their delivery. Their infants

did better on a standardized developmental test (Bayley, 1969), and visited mothers described their babies as happier and more content. Visited mothers were also less likely to abuse their child. This program conclusively shows that a sensitively and comprehensively designed nurse home visiting program can extend the benefits of clinic-based prenatal care for socially disadvantaged women.

Replicability of the initiative: This program and study could be replicated.

Funding: This research was supported by the Bureau of Community Health Services, the Robert Wood Johnson Foundation and the W. T. Grant Foundation.

Evaluation: This project is the first randomized clinical trial of comprehensive prenatal services to prove that the social and health contexts for child-bearing in severely socially disadvantaged families can be improved (Olds et al., 1986a and b).

4. The Hawaii Healthy Start Program

Actions on non-medical determinants of health: Since its initiation in 1985 as a demonstration project in one very high-risk community, the Hawaii Healthy Start Program has evolved into a statewide program designed to:

- promote positive parenting;
- enhance parent-child interaction;
- improve child health and development;

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- prevent child abuse and neglect;
- link all families to a primary health care provider; and
- assure optimal use of community resources.

Families are identified by paraprofessional 'early identification workers' who review hospital admissions to locate families in the target area. These are then screened using a list of 15 stress indicators. Those families with high stress scores are interviewed by a trained worker and rated using the Family Stress Checklist (Kempe). Ninety-five percent of families rated 'high risk' agreed to be visited. Paraprofessional 'family support workers' meet the high-risk mothers before they leave hospital and visit them weekly for about a year, then monthly, and then four times a year until the child turns five. The frequency of family crises, the quality of parent-child interaction, the ability to use other community resources, and the results of standardized scales help workers decide when to lower the intensity of contact, to refer parents either to the family's assigned primary care provider (doctor or clinic), or to negotiate a referral to one of a range of professional services.

The visits are used to build a trusting relationship, which then serves:

- to provide child development information;
- to improve parenting skills;
- to model child-parent interaction;
- to link the family to a primary health care provider; and
- to refer to and coordinate the use of other social services.

The program has built-in mechanisms to keep staff from burning out; indeed, external reviewers have commented on the unusually high staff morale.

Reasons for the initiative: The Hawaii Healthy Start Program was designed to lower the rates of child abuse and neglect for children four and under in Hawaii from the existing level of 15/1000.

Actors: Hawaii's Healthy Start program was developed by the Hawaii Family Stress Center and carried out by professional early identification workers and paraprofessional family support workers.

Analysis of the results: In 1992, 13,377 families that were screened, assessed and served from July 1987 to July 1991 were compared with confirmed child abuse and neglect cases and with clients of other home visiting programs. Among the 2193 well-profiled high-risk families in the program, there was no abuse in 99.2 percent of those families served. For the at-risk families that did *not* receive service, the rate of abuse was almost double the state average (29.3/1000). The rate of abuse was only 7.2/1000 in those high-risk families that did receive service, half the state average and less than the rate of abuse in families rated low risk at birth (8.7/1000). There was no further abuse in any of the families already known to child protection services when first assessed by the program. Neglect in program families (1 percent) was half that of families involved with less intensive visiting programs.

Replicability of the initiative: A structured training program trains new teams of five to eight paraprofessionals, supervisors and managers to replicate the program as it expands across the state. An evaluation of the expanded service for the period 1987–89 reveals outstanding results (99.99 percent non-abuse rate; 99.95 percent non-neglect rate), and has shown that the model is

replicable. By 1993, the families of 54 percent of Hawaii's newborns were screened through 13 sites in Hawaii at a cost of roughly $7 million, of which 75 percent is targeted for home visiting.

Funding: The Maternal and Child Health Branch of the Department of Health coordinates the program by purchasing services from seven private agencies. Despite proven success, the program has had trouble obtaining funding, and its proponents stress the need to seek multiple sources of funding — Medicaid, Zero to Three, and National Centre on Child Abuse and Neglect grants — rather than to rely exclusively on government funding.

Evaluation: Families served are compared with the high-risk population not served and with the state average, but there are no random controls. The National Committee to Prevent Child Abuse is close to completing a randomized trial evaluation, and another is planned by the Robert Wood Johnson Foundation (Breakey and Pratt, 1991; Fuddy, 1992).

5. Staying on Track

Actions on non-medical determinants of health: Staying on Track is a community-wide early identification, tracking and referral project designed to track and assess periodically all babies born in the area from birth to 5 1/2 years of age. It was established to:

- enable all children in the community to reach their optimal physical, mental, emotional and social development;
- increase health knowledge and skills in parents and caregivers; and

- allow earlier identification of vision and communication disorders that could potentially undermine a child's education.

Public health nurses visited children and their families in their homes to observe parent-child interaction when the children were one month and six months of age. Other data on child development, parental factors, and sociodemographic information were collected by questionnaires at public health clinics and at schools when the babies were 1 1/2 years, 2 1/2 years, 3 1/2 years, 4 1/2 years and 5 1/2 years of age. As well as tracking and assessing, public health nurses assisted parents with child development problems and distributed parenting information on issues related to infants or preschoolers.

When significant difficulties in children or families were identified, the families received follow-up visits and/or referrals to appropriate local agencies. Almost half the families required additional phone calls, visits or support for feeding problems, depression, lack of resources, need for support, concerns about abuse, family or marital difficulties, and conflict. Some of these problems were minor and the families required only reassurance but others, many of which would not have been identified without the tracking system and assessments, entailed a series of visits or referral to specialized services. An advisory board from local children's service agencies met regularly to locate services for children identified by the tracking system and to coordinate services across agencies.

Reasons for the initiative: Staying on Track was based on the belief that for optimal family and child functioning during infancy and early childhood, supports must be available.

Actors: The Leeds-Grenville and Lanark Health Unit developed the program. The home visitors were public health nurses, backed up by mental health professionals.

Analysis of the results: The program found a surprisingly high proportion — 22 percent — of mothers depressed after the birth of an infant. Fifteen percent were significantly depressed, and 15 percent were still depressed six months after the baby was born. The degree of family dysfunction and the number of negative incidents experienced in recent months increased the likelihood of depression. This confirmed Cowan and Cowan's 1992 finding that good communication and effective problem-solving before delivery served to protect the mothers from depression. Twenty-six percent of the mothers did not feel supported by their partners at the time of the child's birth, and 29 percent felt overwhelmed by their infant. Twenty-seven percent of mothers rated their infant "below average," a finding that has been associated in the literature with poor outcomes for the child thus designated. When the children were 3 1/2 years old, 25 percent of the mothers rated their offspring as hostile/aggressive, and 22 percent rated them as anxious/fearful. Twenty-one percent of the mothers reported that their child had a significant behaviour problem.

In the final report (Landy et al., 1994), the authors reported on 600 children in three cohorts. They found that the longer a family had been in the program, the greater the improvement in the children's development, in child-parent interaction, and in the parents' sense of competence. The $400 cost per child was compared with the far greater amounts estimated by Schorr (1988) that such children, if not supported, are likely to cost society for remedial education, crime control and social assistance.

Replicability of the initiative: The program could be replicated in other areas.

Funding: Staying on Track was funded for 3 1/2 years by the Health Innovation Fund of the Ontario Premier's Council on Health, Well-Being and Social Justice. Thereafter, the project designers needed to seek additional government funding to extend the project over six years.

Evaluation: As initial funding was only available for 3 1/2 years, a cohort design was used. Since the project was designed to include all children in the community (a universal intervention), there could be no strictly experimental design with random allocation to treatment or control groups. Instead, the authors used a quasi-experimental design comparing time-lagged contrasts between age-equivalent groups (Landy et al., 1994).

Goal #3. During the Preschool Years: High-quality early child care and education can maximize school readiness and control over aggression.

The impact of poverty on health, academic performance and control over aggression can be reduced by high-quality ECCE, which promotes social, emotional and cognitive development, leading to improvements in school performance and a decrease in dropping out (Cameron, 1986; MacKillop and Clarke, 1989; Bertrand, 1993: see Table 2). Yet poor children are less likely to receive high-quality ECCE, despite their greater need for it (Hayes, Palmer and Zaslaw, 1990; Pence and Goelman, 1987).

Table 2. Effects of High- vs. Poor-Quality Early Child Care and Education

High Quality	Poor Quality
increased social competence	decreased social competence
better language and play development	poorer language and play development
better control over aggression	poorer control over aggression
increased compliance with adults	decreased compliance with adults
fewer behaviour problems in Grade 1 as reported by teacher	more behaviour problems in Grade 1 as reported by teacher
better learning orientation (the will/skills required to learn)	poorer learning orientation (the will/skills required to learn)
better school readiness	poorer school readiness

Source: Data from Bertrand, 1993.

The differences between good- and poor-quality ECCE have been well defined. High-quality ECCE has proven to be one of the most effective supports for resiliency in those children from highly disadvantaged familial and environmental circumstances fortunate enough to receive it (Doherty, 1991). Poor-quality child care has all the disadvantages of poor parenting, and can undermine child development so severely that even excellent parenting cannot entirely compensate for it. For that reason, a guarantee of sufficient high-quality affordable ECCE for all Canadian children who need it represents one of the most effective and efficient investments the country could make to support the competence, resiliency and future productivity of disadvantaged children and youth.

6. The Perry Preschool Project

Actions on non-medical determinants of health: This project provided a school-based enriched model of high-quality ECCE for multiply disadvantaged preschoolers (ages 3–6 years). The project consisted of high-quality ECCE for the children four half-days per week and a weekly visit by the teacher to the family in their home.

Reasons for the initiative: This began as a local effort in Ypsilanti, Michigan, to improve the poor school performance of disadvantaged children during the 1960s.

Actors: The High/Scope Educational Research Foundation (Ypsilanti, Michigan). The ECCE staff were certified teachers, with six children assigned to each.

Analysis of the results: Although the project is small (the sample for follow-up was just 123 children) and ended in 1967, its long-term follow-up (more than 25 years) with its extensive benefit-cost analysis still make it one of the strongest and most widely recognized longitudinal studies of the ability of high-quality ECCE to foster resiliency in poor and multiply disadvantaged children (see Table 3).

Replicability of the initiative: The program, curriculum and research design are well described, making this a replicable program.

Funding: The project was government funded; it generated a benefit-cost ratio of more than 7:1.

Evaluation: The children were randomly assigned to experimental and control groups, with two minor exceptions that are not considered enough to weaken the experimental design. The children were followed up at ages 19 and 27. The program's graduates at age 27 are compared in Table 2 with the performance of members of the control group at the same age (Berrueta-Clement et al., 1984; Schweinhart et al., 1993; Barnett, 1993).

Table 3. Outcomes for Graduates of the Perry Preschool Program at Age 27 Compared with a Control Group (No Preschool)

Arrests and convictions	Lower by 50%
Five or more arrests through age 27	Lower by 80% (7% vs. 35%)
Teenage pregnancies (and, therefore, chronic dependency)	Lower by 42%
Graduations from high school	Higher by 33%
Average monthly earnings (age 28) * earning $2000/month or more	$1219 * Four times as many (29%)
Own own home	Three times as many
Never on welfare over past 10 years	Twice as many (41% vs. 20%)
Committed to partner/children	Significantly more
Paying taxes	Significantly more
Estimated savings by age 27 for each $1.00 spent on program	$7.16

Goal # 4. School-Based Programs: Helping children succeed in spite of disadvantage.

The potential of schools to protect the developmental potential and capacity for resiliency of many disadvantaged children is widely recognized. Four quite different prevention programs will be profiled here. Helping Children Adjust and the Ryerson Outreach are universal programs designed to improve outcomes for all children in the participating schools. Cities in School and the Montreal Longitudinal Study were developed to reduce specific outcomes — dropping out and serious delinquency respectively — in children identified as being at high risk.

Please note: Programs marked by an asterisk (*) are ones with extremely promising design and preliminary reports, but ones in which final analysis of the data is not yet complete.

7. The Ryerson Outreach/Ryerson Community Initiative *

Actions on non-medical determinants of health: Ryerson Outreach was designed to advance the well-being of the whole child — academically, socially and emotionally — by using a public school as the hub of service for its community with the active collaboration of child health, child mental health, daycare, child welfare and social service professionals serving in a school setting. Before the Ryerson Outreach program, the school operated basically on its own, seeking collaboration with external agencies or professionals on a case-by-case basis only and usually as a last resort. Previously, board of education psychologists and social workers dealt only with the academic and related needs of diagnosed children.

From the beginning of this very low-budget program, the mental health consultants worked with the principal, vice-principals and school staff to:

- achieve greater understanding of children's psychosocial needs;
- involve the community as a full partner in the school;
- bridge the gaps that existed between the community, the school and different caregivers, services and programs; and
- make the school an active partner in the development of the surrounding community.

The reaching of a common agenda and the initial phase of the project are well described elsewhere (Chung, Charach and Ferguson, 1993). Social agencies were individually invited to work with the school to provide an improved service for students and families, to help develop the surrounding community, to provide nutritional, mental health and social service supports and, when necessary, improved liaison, and to expand and integrate recreational activities, out-of-school programming and community services.

Catalysts for change were staff concerns about the behaviour and unmet needs of the students; the agreed-on need for a better way for school and social agencies to combine to serve children and families with whom both were involved; and the shrinking of available funding caused by an economy in recession. There was no active resistance, although some school staff remained minimally involved while others participated enthusiastically (Bolton 1996). The vision, energy and commitment of all involved, especially the strong leadership of the principal, were crucial to the success of the program.

Reasons for the initiative: The project grew out of a desire to improve academic and social outcomes and the quality of life for children in a school in a poor, high-density, high-crime, high-drug-abuse, multicultural neighbourhood in inner city Toronto. The project was intended to

replicate James Comer's use of consultee-centred consultation by mental health professionals in a school setting (Comer 1985; 1988).

Actors: The project began with the Hincks Children's Mental Health Centre and the Children's Aid Society of Metropolitan Toronto donating the services of a child psychiatrist and a social work supervisor for one half-day a week to work in the school with the principal and staff. All three organizations were founding members of the Sparrow Lake Alliance (Steinhauer, 1992), which brought the project together.

Analysis of the results: A survey of the teachers' opinions about changes (based on 32 returns in 1993 and 44 in 1995) is summarized in Table 4. More teachers feel that students with special needs are being identified earlier, and that the gap between the identification of student needs and the delivery of help has shortened over the last two years.

Table 4. Highlights from the Ryerson Teacher Survey

Variable	1993	1995
Number/severity of conduct problems outside the classroom has decreased	17 %	44%
Amount/severity of vandalism has decreased	17 %	48%
Respect shown to teachers has increased	13%	39%
Respect shown to other students has increased	7 %	41%
Respect shown school property has increased	13 %	47%
Average proportion of class reported as frequently absent	13 %	5%
Percentage of teachers who believe that students with special needs are being identified earlier	37%	57%

Staff, however, express some concerns about their communication with, and the support they receive from, the administration compared with two years ago (Ryerson Community Outreach, 1995). This may reflect a change in the style of the new principal who came to the school and the project just two years ago, but may also result from changes following from deteriorating economic conditions, and a general decrease in teacher morale not confined to this project. The prevention literature notes that, frequently, innovative prevention projects collapse when a charismatic leader leaves. This project, however, has improved its results since the originating principal retired.

Replicability of the initiative: This project will be replicated in five schools in the City of North York in September 1996, with the Ryerson principal serving as an advisor.

Funding: This is an extremely low-budget project, with costs shared between the school board and the social agencies that donated the services of their staff. For one year, the Ontario Ministry of Community and Social Services funded a community worker. This funding has been withdrawn, and replacement funding is being sought in the private sector.

Evaluation: So far, the evaluative component of the program has been based on responses to a staff questionnaire. The evaluation component of this adaptation of the work of Comer in the schools of New Haven, Connecticut is currently being extended and made more rigorous through, for example, the inclusion of more objective data and the incorporation of randomization into the

design. The North York replication will use the strengthened evaluation protocol and will include comparison schools in the experimental design.

8. Helping Children Adjust *

Actions on non-medical determinants of health: This project was designed to compare the effectiveness of distinct types and combinations of interventions at improving the behavioural adjustment, interpersonal competence (social skills), and academic performance of public school students. It specifically targeted: troublesome or persistent antisocial behaviour that is oppositional and/or aggressive; and passive, submissive, withdrawn and overly compliant behaviour that may involve victimization. It aims to reduce the number of current behaviour problems, as well as the number of future problems. The top 10 percent of students identified in teacher and parent questionnaires were defined as "at risk" for project purposes. The project involves students between kindergarten and Grade 3 in more than 60 schools under 11 school boards across Ontario over a five-year period. One of these boards dropped out after the first year. Begun in 1990–91, the project is now in its fifth year.

Project schools are randomly selected to become intervention sites. Each board receives a full mix of interventions that are, for the most part, built on existing resources in the school. Schools not yet selected for intervention serve as comparison sites in the interim. About the same number of children are assigned to each program. All principals, teachers and primary division students in the study schools participate. The programs include:

- a class-wide social skills/behaviour management program (CSSP) combined with a parent management training program (PMT);

- an academic support program (ASP); and
- no program.

All three programs are being tested alone and in combination with others, but so few parents (less than 15 percent) used the PMT that it was soon dropped.

Reasons for the initiative: This school-based primary prevention program grew out of concern about the 8.3 percent of children between ages 4 and 11 identified by the Ontario Child Health Study (Offord et al., 1989) as having persistently troublesome externalizing behaviours, and out of concern for children who are excessively compliant.

Actors: The design was developed and the project conducted by a team from McMaster University headed by Dr. David Offord and Dr. Michael Boyle.

Analysis of the results: Final results are not yet available. This project is still going on, so that the evaluation of the data is not yet complete. It is included because of the rigour of the evaluation process.

Of the eight schools that participated in the CSSP program in the first year of the study, four have expressed interest in continuing beyond the formal commitment period. Allowing teachers to modify program components to fit their particular style increases the rate of continuation. Preliminary results reported in September 1994 (after the third year) noted interesting profiles for children who had changed schools during the program and for those whose parents did use PMT. Most teachers and a smaller majority of parents considered the CSSP and

the ASP helpful, but teachers complained about the planning time and paper work involved in combined interventions.

Four schools out of 42 did not comply with the experimental design over the first four years of the study. In most cases, these failures were due to insufficient support, such as lack of resources at the board level (e.g., to cover all personnel costs associated with program delivery) or a negative administrative response at the school level (disappointment with program assignment or concern about how much time program implementation would take from teachers). The principal's enthusiastic support was crucial to success. It is possible the demands on staff to carry out a protocol handed down from above contributed to some of the negative responses.

Replicability of the initiative: The project design and research protocol are very clearly described and could be replicated.

Funding: Total cost and resources — $4 million over six years — were shared by three ministries (Health, Education, and Community and Social Services) and the school boards involved.

Evaluation: The experimental design is comprehensive, with randomized assignment of programs to the participating schools. An economic analysis will compare the cost of each intervention yielding significant improvements with the dollar savings resulting from the decreased use of special services (Boyle et al., 1994).

9. Cities in Schools

Actions on non-medical determinants of health: Cities in Schools (CIS) develops community partnerships that bring resources from business, social agencies, foundations and volunteer organizations into schools to serve young people at risk of dropping out of high school. Such youth, often struggling under the weight of multiple social, economic and emotional problems, receive a program that is highly personal, accountable and coordinated. The CIS program uses small teams of caring adults working within the school to provide a highly supportive learning experience and lower the stress of social and emotional problems. Academic guidance is provided by teachers and volunteer tutors during school hours, and a service coordinator hired by the program arranges necessary social supports (e.g., financial, housing, job counselling, social counselling, health care, in-school tutoring).

Reasons for initiative: Cities in Schools, Inc. is the United States' largest non-profit organization devoted to preventing school drop-out. Pilot projects in two North York schools were set up in 1989. The organization quotes the Conference Board of Canada that decreasing the drop-out rate to 10 percent by the year 2000 would save Canada $20 billion.

Actors: This is a replication of a program that has been operating in the United States for more than 30 years. The volunteers, teachers and social agency staff who provide the school-based services are described above.

Analysis of results: The program claims it can lower the drop-out rate, increase the high school graduation rate, give at-risk students the skills needed in the work force, and thereby increase Canada's productivity and competitiveness. The pilot projects in North York claim to have retained in school 75 percent of the 259 students enrolled in the program.

Replicability: The North York experience shows that the program can be replicated successfully. The CIS manual entitled *The Cities in Schools Context: Concept and Strategy* contains an extremely concrete and readable description of the program and why it works, along with an unusually clear and thoughtful analysis of the procedure for and barriers commonly encountered in community mobilization.

Funding: The North York Pilot program relied for two thirds of its funding ($1700/student) on a government grant that has since been cancelled. The other third, which the organization is working to expand, is from the corporate sector, social service agencies (which assign staff to the target schools), and the board of education (which contributes the teachers). The corporations contribute cash donations, part-time and summer jobs, computers, direct involvement as volunteer mentors, tutors and board members. The North York program is currently vulnerable because of the loss of government support.

Evaluation: CIS has an obvious outcome measure — the number of participants who do not drop out or who drop back in and stay in — and has been operating for 30 years. The retention rate in North York was 75 percent over five years (Cities in Schools, undated; Cities in Schools — North York, 1995).

10. Montreal Longitudinal-Experimental Study of Disruptive Kindergarten Boys

Actions on non-medical determinants of health: The study began in 1984 by assessing the behaviour of all (1037) boys in kindergarten in the 53 francophone schools in the most disadvantaged neighbourhoods of Montreal. A random sample of highly disruptive kindergarten boys was enrolled in an intensive prevention program; there were two randomly allocated comparison groups of similar boys. The prevention program, starting at the end of Grade 1 and lasting two years (ages 7 to 9), included home-based parent training and school-based social skills training for the boys. Using assessments, direct observations and questionnaires, the study followed the entire sample of boys, their families and their friends annually from age 10 to 16 years.

Reasons for the initiative: To understand the development of violent behaviour in boys and to identify ways to prevent deviant development.

Actors: A team from the Research Unit on Children's Psychosocial Maladjustment, University of Montreal, headed by Dr. Richard Tremblay.

Analysis of results: The risk of being among the 8 percent most delinquent between ages 10 and 14 was nine times greater for kindergarten boys rated aggressive by two or more teachers than for those never rated aggressive. Boys rated aggressive by only one teacher were five times likelier to become delinquent than those never rated aggressive. The following forms of kindergarten behaviour (apart from aggression) were used to predict delinquent behaviour from ages 10 to 13:

hyperactivity in kindergarten (best predictor); lack of anxiety (next best); and lack of altruistic behaviour. Having all three quadruples the risk for severe delinquency in early adolescence, but the strongest protective factor — the presence of altruistic behaviour — in itself decreases the level of risk by 80 percent. The association of individual characteristics of the boys in kindergarten was stronger with substance abuse by age 13 than was having deviant peers in preadolescence (see also Kellam, 1990). Boys treated by the program had only half as many serious school adjustment problems up to age 15 (22 percent vs. 44 percent), and from ages 10 to 15 the treated boys reported fewer delinquent behaviours than those not treated. The more aggressive boys were also less likely to achieve to their age level in school.

Replicability of the initiative: The clear description of both the intervention and the research protocols suggest that the only barrier to replication would be financial.

Funding: Funding came from federal, provincial and municipal government agencies.

Evaluation: This is a seminal model for a selected preventive intervention with boys at high risk for serious delinquency and school failure as indicated by their kindergarten behaviour (Tremblay et al., 1995).

Goal # 5. Programs Designed to Mobilize Disadvantaged Neighbourhoods: Transforming them from negative to positive influences that support successful development.

11. Better Beginnings, Better Futures*

Actions on non-medical determinants of health: This major research-prevention program is reaching 4000 families with young children at risk, up to the age of eight, in seven urban and five First Nations communities. It is designed to:

- promote cognitive, emotional and social development in children;
- prevent cognitive, emotional, social and behavioural problems in children; and
- increase the ability of high-risk communities to support healthy and competent child development.

All programs involve the community extensively in all aspects of the program, and in integrating existing and new services for children. One project has 19 people on staff and is training 16 community members who will remain in the community after the project is completed. Each community chooses a focus on infant, preschool or ecological primary school programs, which will continue for four to five years, but 85 percent of the funds must be spent on one of these, while the rest are discretionary. Each project respectfully mirrors the language and cultural traditions of its community.

Programs are designed:

- to strengthen children, through:
    - home visiting by community members to decrease the isolation of unsupported high-risk mothers,
    - before- and after-school latchkey care, and
    - support for classroom teachers;

- to strengthen families, by inviting parents to contribute any way they can (e.g., at daycare centre) because "when they feel respected, they bloom", and through support groups for isolated mothers (e.g., Take a Break groups; Parent to Parent groups for parents of older children); or
- to strengthen communities.

Reasons for the initiative: Better Beginnings is a comprehensive attempt to promote healthy development and prevent developmental problems in young children living in disadvantaged communities, and to help disadvantaged families and communities provide for their children.

Actors: This project was funded by Ontario's ministries of Community and Social Services, Health, and Education, with additional funding from the federal Department of Indian and Northern Affairs and the Secretary of State.

Analysis of the results: The final results and analysis of this project have not yet been published. The researchers will follow these children for approximately 25 years, to see if they do better than children from comparable communities. Although the project is not yet complete, some valuable lessons have already been learned by the end of the fourth year.

Parents and community members are effectively participating in planning, implementing, steering and evaluating. Services are being integrated and the quality of programming is being upgraded and tailored to what the communities define as their needs. Effective home-visiting, enhanced child care, and ecological primary school programs are now in place. There is increased neighbourhood pride, the children are less stressed, more cooperative, and better clothed and fed.

and parents, teachers and project staff are working together on the children's behalf. More parents are being trained, and they are dealing with their own children better.

On the other hand, there is clearly a limit to what local service integration can do while funding for services remains segmented. Also, service integration without genuine community involvement may be worse than no integration at all. It is clear that for success, there must be 50 percent volunteers/parents/community members on each major committee, enough to reflect the true diversity of each neighbourhood. The community must truly share power in all major decisions, such as job descriptions, spending and research questionnaires, rather than leaving decisions to core staff or an elite board of directors.

Replicability of the initiative: Since both the model and the research protocols are clearly described, the project could be replicated if funding was made available

Funding: The project received $7 million a year for five years from the ministries listed above.

Evaluation: The project found enormous resistance to research. People in these communities felt stigmatized, second-class and researched to death without benefit to themselves or their children while their neighbourhoods continued to deteriorate. They saw the demand that they take part in research as blackmail to get necessary services that the middle class gets for free. As a compromise, the project hired site researchers living in or near the communities and set up local research committees with the power to modify forms, or veto research that they considered patronizing or irrelevant. Final results have not yet been analysed. (Ontario, 1993; Peters and Russell, 1993).

12. Growing Together*

Actions on non-medical determinants of health: To serve multiproblem families while keeping central the needs of young children, Growing Together offers a multimodal intervention program of: 20 different services for individuals; family therapy; 14 different group programs; and seven community approaches. Workers with the program visit families after a baby is born and assess their needs and level of risk. Based on this information, families are offered a variety of services ranging from health promotion through intensive parent-infant therapy to less intensive family support, and a variety of initiatives including advocacy, entrepreneurial activities and such community development activities as outreach, community mobilization and others chosen by the residents.

Project staff are building a partnership with the community. They hope to:

- optimize the attachments, health, cognitive ability, language and social skills, school readiness, adjustment (home and school), and competence of the community's children from birth to age five;
- meet the emotional and therapeutic needs of psychiatrically disordered parents, severely dysfunctional families and substance abusers, thereby helping them develop the knowledge, skills, and stability needed for sound parenting; and
- help the parents use social services better, and build a sense of community cohesion, mutual aid, support, ownership and control needed to make the community a safe one for its residents.

Reasons for the initiative: This project was designed to improve the health, well-being and development of infants, young children and their families living in an apartment complex where one third of the families have eight or more risk factors. Four or more factors constitute a serious risk for developmental failure. One obstacle to overcome was the sheer magnitude of the problems faced by members of the community and the damage that would be done by such an environment. The average income in the complex is only half of the city average. Only 27 percent of the families speak English in the home and interpreters were needed to translate the 18 languages used by the population. Another problem was opposition from senior public health officials to public health nurses participating in the home visits that are at the heart of the program, and to their investing so much time and energy in a single community.

Actors: Growing Together is sponsored by the Hincks Centre for Children's Mental Health, the Toronto Department of Public Health, with funding from the Invest in Kids Foundation.

Analysis of the results: Growing Together is still in its early stages, and its largely qualitative evaluation protocol is still being developed. As a result, only anecdotal evidence as to its effectiveness is available at this point. It did, however, receive the Peter Drucker Canadian Foundation Award for Innovation in the Non-profit Sector in 1995.

Replicability of the initiative: The Invest in Kids Foundation plans to replicate the program in other sites in Canada in 1996–97. If the replications are true to the philosophy of the original, each will have its own individual character through responding to the will of the community it serves.

Funding: A significant problem in obtaining funding has been the sensitivity of the program to individual needs, which, while essential to the integrity of the design, has made it harder to satisfy the conventional criteria set down by potential funders. Although its financing is not yet secure, it is not known whether the Invest in Kids Foundation will continue funding this original program as it expands the program to other Canadian cities.

Evaluation: Problems in designing the research protocol have been the high degree to which the program is tailored to meet the needs of individual children and families, and the conviction that it is unethical, in so needy a population, to assign residents randomly to experimental or control groups (Growing Together, 1996).

Implications for Policy

Currently, at a conservative estimate, the health, mental health, competence and future productivity of at least one in four of Canada's children and youth are being compromised by psychiatric disorders, school failure, and antisocial and violent behaviour. Also, at a time when cutbacks in employment opportunities and services are greatly increasing pressure on all but the wealthiest and most secure families, health and social service are being cut back, overcrowding and undermining both the mainstream and specialized services so badly needed by many children and families.

If we fail to help vulnerable families meet the needs of their children, especially while the windows of opportunity remain open (some of the most important of which close within the first two or three years of life), both the children whose healthy development, competence and future

productivity we will have undermined and Canadian society will pay the price for the rest of those children's lives (Carnegie Corporation of New York, 1994; Keating, 1992; Promotion/Prevention Task Force, 1996; Begley, 1996). The following changes in policy *at all levels of government* will help protect the potential for resiliency of a significant number of children whose prospects would otherwise be blighted.

1. The elimination of child poverty is an excellent long-term investment, one that deserves the highest national priority.

This is crucial, not only because of Canada's existing commitment as a signatory to the *United Nations Convention on the Rights of the Child*, but also because we will pay later — and much more — for our failure to protect our children from poverty. As documented in this paper, poverty and its associated risk factors at least double the risk for most major disorders that undermine children's competence and potential. This is unacceptable for Canada as well as for its children. We, as a nation, end up paying more for medical care, remedial education, psychiatric and social services, crime control, and social assistance. We also pay through the deterioration of our social capital, with an increasingly uncivic society with unacceptably high levels of crime and violence, and through the waste of the potential productivity on which Canada's future, including its competitive edge, depends.

2. The protection of children's — and especially disadvantaged children's — developmental potential must become an integral part of economic policy at all levels of government.

Until this is so, roughly one in four of our children and youth will come off the developmental assembly line as "seconds". At a time when social policy is being made by ministers of finance, we must realize that this country has two deficits — one economic, the other social. These two deficits are inextricably intertwined, as New Zealand has demonstrated, and any attempt to correct one at the expense of the other will, ultimately, lead to aggravation of first the other, and then both.

3. At a time of diminishing resources, a high priority should be given to protecting the development of children and youth.

The quality of care that a child receives in the first three years of life is the single most important factor (excepting genetics) influencing that child's future development, health, mental health and productivity. Support for the healthy development of children should be a cornerstone of policy at all levels of government. It is easier, cheaper and more effective to get children off to a good start than to redirect them once they are already on a trajectory toward mental illness, delinquency, dropping out and chronic dependency. Those children who fail to rise above the constraints of disadvantage will continue to be a burden rather than an asset to society throughout their entire lives. It is in Canada's interest — as much as in theirs — to ensure that all children's families have the social supports needed to protect their developmental potential.

4. To achieve this goal, all levels of government should adopt and give high priority to a broadly based, comprehensive, integrated, long-term, research-based policy supportive of child development from conception through infancy, through the preschool years, through to school completion and a successful transition to the workplace.

Such a policy will require integration among policies at all levels of government, between all ministries that affect the lives of children: Justice, Immigration and Indian Affairs have just as important a role in such a policy as do Health and Human Resources. Such a policy will recognize the excellent investment in Canada's future, in both human and economic terms, represented by programs like those profiled in this paper.

Programs particularly deserving of support include those that:

- are population-based;
- derive from and respond to a clear analysis of the problem they are addressing; and
- are designed to promote health (assist development) across the life span, e.g., through prenatal supports; home visiting; ECCE; school-based programs and community mobilization programs that are:
    - research-based, in that they apply to or build on what is known, but are prepared to adapt what is known to the needs of the population being served, and
    - accountable, and have an evaluative component, but one that does not stifle the need for creativity and flexibility on the part of truly innovative service providers (see Schorr, 1988, summarized in Steinhauer, 1993).

5. Each level of government should commit a prescribed percentage of its revenues (1 percent) to programs that support the healthy development of children.

As we continue to adjust the service system in response to economic constraints, preference should be given to health promotion and prevention programs that:

- support isolated or at-risk mothers-to-be and new mothers through home-visiting programs for all mothers of newborns, including a prompt identification of, and ongoing involvement with, those at risk for neglecting or abusing their babies. Good models are Hawaii's Healthy Start Program and the Olds Prenatal and Early Infancy Project. As an incentive, consider Health Canada's estimated cost of supporting an abused child over a lifetime: $1 million (Children's Aid Society of Metropolitan Toronto, 1995).
- provide a continuum of developmental supports similar to the model projects profiled in this chapter for parents of children at all ages;
- increase the availability of sufficient, affordable high-quality ECCE for children in families where both parents must work to avoid poverty — this should be a national priority; and
- increase funding and give priority to culturally sensitive, respectful community mobilization programs, to help them develop a sense of community, and to provide environmental support for families raising young children in high-risk areas.

6. We need a community-based strategic planning process to focus community attention on the human and economic costs of the failure to protect the development of vulnerable children and their families, especially in the first three years of life.

Much of the public opposition to ECCE and to rational, effective and efficient ways of dealing with young offenders is strongly rooted in ignorance and frustration (Ekos Research Associates, 1995). People need to know what works, why it works, what will happen if we ignore disadvantaged children's developmental needs, and why the promotion of healthy child development, especially for children of disadvantaged families, makes such sense in both human and economic terms. An informed public will be more supportive of children and their developmental needs.

7. As part of this process of public education, we need to persuade the community to begin to look at children as the Europeans do — as a shared natural resource that represents society's future — rather than as most North Americans do — as solely the responsibility of their parents.

The world of the 1990s is very different from the world of the 1950s, '60s and '70s. The effect of change on family structure and functioning, and the fact that many will need assistance from society as they struggle to raise their children in increasingly difficult times, is not widely appreciated. We need our political leaders to educate the public about child poverty, ECCE and delinquency.

8. We need to establish a single base to coordinate funding for family-centred programs to strengthen families with infants and toddlers.

Innovative service providers like the initiators of the success stories described in this paper waste far too much time shopping around for funds to keep their programs viable. They are often at the mercy of funding agencies whose rigid criteria, if met, would undermine the effectiveness of the program. Growing Together is a good example of a program whose major design strengths made it harder to obtain funding. As stated in Recommendation 4, accountability should not stifle creativity or flexibility.

9. We need a national standard for social supports and services.

The change to the Canada Health and Social Transfers represents a particular threat to Canada's neediest children and their families. Not only are transfer payments being cut, but the reduced cash transfers will go primarily to the established institutions — medicare, postsecondary education — while the social assistance and social services needed to support the development of disadvantaged children and youth and their families are left out in the cold (Steinhauer, 1995b).

There is a need for — and room for — well-designed cuts in some areas of social spending, but choices about where to cut should be governed by research, not ideology or public pressure (Steinhauer, 1995b). But there will be no agreement on a national standard for social supports and, in the absence of one, several provinces are already turning their backs on those children and families most in need of help. There is rising opposition to national standards by many provincial governments, but if the federal government abdicates its constitutional

responsibility to level the playing field (i.e., by abandoning vertical and horizontal equity), it will be ignoring what a recent poll says Canadians consider most unique about being Canadian (Gregg, 1995). A positive and informed campaign to protect what Canadians clearly value might be one of our strongest weapons in the war to hold the country together.

10. We need to increase public awareness of the importance of social capital and the diminishing status of civility in our society, and to mobilize as many individuals and groups as possible to begin rebuilding the social fabric.

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Methods for Developing Resiliency in Children from Disadvantaged Populations.
Prepared for the National Forum on Health by Paul D. Steinhauer.
March 31, 1996. 78 pages

EXECUTIVE SUMMARY

(Adapted from: Summary of *Developing Resiliency in Children from Disadvantaged Populations*, by Paul D. Steinhauer. In *What Determines Health?: Summaries of a Series of Papers on the Determinants of Health*. Commissioned by the National Forum on Health, 1996)

Focus

This paper reviews the different ways that resiliency has been defined in the professional literature, and defines resiliency as "unusually good adaptation in the face of severe stress, and/or an ability of the stressed person to rebound to the prestress level of adaptation." Based on this definition, the paper reviews biological, psychological, familial and social factors related to disadvantage that undermine the development of the precursors of resiliency, and lists factors that protect the potential for resiliency in each of these areas.

Several protective factors foster resilience:

- personal characteristics, including social competence, problem-solving skills, autonomy, perseverence and an optimistic outlook
- families and schools that provide care and support, high but achievable expectations, and opportunities for children to participate and contribute
- families that have the strength to cope and endure despite chronic stress and repeated crises
- caring communities and nations that support the family and see children as a shared and precious resource

Disadvantage

The term "disadvantage" is often used as a synonym for poverty. Children who grow up in poverty show almost three and one-half times the number of conduct disorders, almost twice the chronic illnesses and over twice the rate of school problems, hyperactivity and emotional disorders as children who are not poor. The evidence suggests, however, that it is inequity, marginalization and powerlessness, rather than economic deprivation, that aggravates poor families' distress.

Children who live in neglectful, conflicted, violent and abusive families are also disadvantaged, whether or not they are poor. Children with inadequate child-care and parents who have little time or energy to give to parenting may also be disadvantaged. In most cases, what has been termed "family time famine" is brought on by the economic necessity for both parents to work long hours or for a single parent to work and study. These parents have an upsetting choice: they can stay at home with their children (thereby dragging the family into poverty) or they can settle for whatever child care is available, the quality of which may be far from adequate.

Content

What risks and threats inherent in disadvantage undermine a child's potential for healthy growth and development, and how can they be addressed?

The paper proceeds chronologically through a number of stages - from conception through birth, from birth through the toddler years, the preschool years, the school-age years - examining for each stage the risks and protective factors within the child, the family and the community relevant to the achievement of resiliency. For each of these, it lists crucial developmental tasks and then examines how risk and protective factors influence the achievement of these tasks and preparation for resiliency.

In the second part of the paper, "Promoting Resiliency in the Face of Disadvantage", the author defines the goals and models of interventions specific to each stage that have been shown to foster the development of the precursors of resiliency by counteracting the major risks experienced during that stage. These are illustrated by 12 "success stories": established programs that have either proven their ability to help significant numbers of disadvantaged children achieve resiliency, or are well-designed and promising ongoing projects worthy of continued scrutiny while their effectiveness and efficiency are being established. These "success stories" include, for example:

- *Prenatal months*: interventions to increase the number of healthy babies born to well-prepared, relaxed mothers, e.g. the Montreal Diet Dispensary (MDD) which provides a home assessment and ongoing counselling from a dietician and food supplements to socioeconomically disadvantaged mothers
- *Birth to three years*: home visiting programs to support the families of children at risk, e.g. the Prenatal and Early Infancy Project in New York State; The Hawaii Healthy Start Program; Staying on Track, developed by the Lanark Leeds and Grenville Health Unit
- *Preschool years*: high quality early childhood care and education (ECCE) to maximize school readiness and control over aggression, e.g. The Perry Preschool Project (Michigan)
- *School years*: school-based programs that help children succeed in spite of disadvantage, e.g. Ryerson Outreach/Ryerson Community Initiatives; Helping Children Adjust (Ontario); Cities in Schools (U.S., being piloted in North York, Ontario); Montreal Longitudinal Experimental Study of Disruptive Kndergarten Boys
- *Communities*: programs to mobilize disadvantaged neighbourhoods and transform them from negative to positive influences (both programs in early stages of operation): e.g. Better Beginnings, Better Futures; Growing Together

Policy Implications

The paper concludes with recommendations for policy that, if instituted, would allow significantly greater numbers of disadvantaged children to transcend adversity and achieve their developmental potential.

Recommendations

Currently, the health, competency and future productivity of at least one in four Canadian children and youth are compromised by poverty and other adverse conditions. If we are to foster resiliency among these children, we must adopt a common resolution to:

- eliminate child poverty and make it the highest national priority
- protect and nurture children and youth through all the key stages of development, especially in times of diminishing resources
- view children as a shared natural resource that represents society's future, not as the sole responsibility of their parents
- focus community attention on the human and economic costs of failing to protect the development of vulnerable children and their families
- rebuild the social fabric that is part of being Canadian at the national, provincial and territorial levels
- foster social support in the community that protects and nurtures healthy child and youth development

To achieve this goal, the author suggests that all levels of government need to:

- adopt a comprehensive, integrated, long-term, research-based policy that supports child development from conception to adulthood (the transition to work)
- commit a prescribed percentage of its revenues (e.g., 1%) to programs that support the healthy development of children
- confront and change current social policies that threaten Canada's neediest families
- face head on the lack of national standards for social support and services
- make investments in social capital as important as investments in economic capital.

References

There are 174 references, pages 69-78.